

# Sen. Gravel Praises Jackson's Release

Senator Henry Jackson's release of the Federal Field Committee's report on the Alaska Native land claims was received by Senator Mike Gravel who called the report "A very significant addition to the body of knowledge necessary to reach a fair and equitable settlement of the Native land claims."

"The report concludes," he said, "that the nation and its representatives have been moved by the Alaska Native cause, and recognized the validity of the claims, and wish to see justice done."

"The prospects for a settlement in the 91st Congress are greater than at any time in the past," the senator stated.

"Those who have traveled through the villages and the remote regions of Alaska have seen in stark reality the overwhelming need for a settlement. The joblessness, sickness and abject poverty well documented by this report, can be eliminated once and for all when the land claims settlement is made," Gravel said.

The senator stressed that the Alaska Federation of Natives would be instrumental in the mobilization and coordination of the Native case before Congress.

He said that a strong AFN was necessary for a just statewide settlement.

Gravel had praise for specific provisions in the 565-page report by Senator Jackson. But he mentioned that there were other areas such as the land use section of the report, which needed comment from the AFN.

Senator Gravel also noted that the report emphasized a monetary settlement, although the report opened certain federal lands previously closed to a land claims

## Snowshoe Race . . .

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rent snowshoe training, Ralph Perdue, Fairbanks native leader and successful jeweler, said:

"Hmm, that's interesting. I think I better start walking home a mile from now on. I've been keeping in pretty good shape by riding my sno-go the past few weeks. I've also cut down on my martinis—I mean I quit them so my wind is better this year."

When asked whether Perdue might challenge the new Alaska Governor Keith Miller, he said:

"I would go so far as that. I don't think he's in as good a shape as I am. In fact he doesn't look in shape. I'm just trying to be fair. I wouldn't want to embarrass him by a bad defeat."

Perdue said he got himself a new pair of snowshoes this year. He said he will start training making sure to attach his ptarmigan feet at the front tips of his snowshoes.

He said that according to the old Indians, ptarmigan feet are supposed to make the snowshoer "light-footed." When he was training last year, Ralph Perdue became known as "Light-foot Perdue."

Perdue, however, came in a bad second last year when he came a lap behind the leader Richard Frank.

Perdue had boasted before the race that he could outrace Frank with a man on his back. He, Emil Notti and Don Wright kept falling in the deep snow and had trouble getting up to start again while Richard Frank coasted along at a good trot leaving his challengers far behind.

"I told you I'd run circles around those guys," said Richard Frank jubilantly last year. "And I'm years and years older than they are."

settlement.

"Land is the essential issue before the Native people," Gravel said, "and I expect that there will be serious discussion among Native leaders to determine how much money and how much land their settlement should include."

"I am fully convinced that the Congress is ready to act. Senator Jackson's exhaustive report demonstrates how important the Congress believes this legislation to be," Gravel said.

"If the Native people can unite behind a specific proposal, we will be strategically prepared for the hearings and the debate."

Gravel concluded: "I think we can succeed in the endeavor, which will ultimately benefit all Alaskans."

## FFCDPA Points High Priority on Arctic Study

The Federal Field Committee for Development Planning in Alaska has assigned high priority to studies of Arctic Alaska in terms of resource, economic and social development.

The committee—responsible directly to the President—is urging correlated efforts by state and federal agencies, industry and academic institutions. Elements of a program suggested by the committee include:

1. An information transfer program on environmental data.
2. Exchange of information on pertinent plans in the resource, engineering and environmental fields for efficient deployment of governmental manpower and funds.
3. Discussion of needs and environmental and design criteria for a new Arctic community to serve developments in the area, and determination of whether a need exists for such a community.

## Banquet . . .

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serve with Bowman.

Miss Carol Bahr, Anchorage, will be in charge of decorations and getting hostesses for the anniversary dinner. She will work along with the Cook Inlet Native Association.

Vincent Price, the famous movie actor, art critic, gourmet and chairman of the Department of the Interior Arts and Crafts Board, has tentatively accepted to be the keynoter of the Anchorage banquet.

Arts and arts and crafts exhibit is being planned in conjunction with the anniversary dinner and the exhibition will be at the Museum and Fine Arts Building, 121 W. 7th Avenue in Anchorage.

Mike Kennedy of the Anchorage museum said that items may be sent directly to the museum and that his staff will take special care of all items. Items may be sent there anytime between now and the banquet date, specifying they are for the Tundra Times arts and arts and crafts show.

There will be a cocktail hour before the banquet and the Anchorage-Westward Hotel management promised ample dispensing stands for the occasion.

The dress for the occasion will be semi formal. The charge to attend the dinner will be \$15 per person and \$25 per couple.

Time of the banquet will be specified at a later date.

## UA Annual Poetry Contest Aired By Oliver Everette

COLLEGE—The annual Spring Contest of the University of Alaska has been announced by Oliver Everette of the College of Arts and Letters.

Prizes in four categories will amount to \$200.

The contest is open to grade school, high school, college students, and non-students. The deadline for entries will be 5 p.m. March 3.

Three first prizes of \$50 will be given to winners in the high school, college, and non-student categories. The top three grade school entries will receive \$25, \$15, and \$10 prizes.

The non-student competition is open to school faculty and part-time students, except members of the College of Arts and Letters.

## Study of Earthquake Forecasting

COLLEGE—Accurate earthquake forecasting is still years away, but Seismologist Eduard Berg at the University of Alaska's Geophysical Institute has taken the first step toward that goal with a \$200,000 research project sponsored by the U.S. Air Force Office of Scientific Research and the Atomic Energy Commission.

Earthquakes don't just happen, Dr. Berg asserts. "It takes months and sometimes years for the earth's crust to store up the tremendous amount of energy released in an instant as an earthquake."

Berg likens the earth's crust to taffy, building up stress and strains as it is continually twisted, turned, stretched, and compressed by the little-understood process of crustal deformation. "Eventually the crust, like the taffy, reaches the limit of its elasticity and fractures (pulls apart), liberating the energy that has deformed it as an earthquake, and then springing back."

In the new research project, Dr. Berg and his associates, Dr. Hans Pulpan, Larry Gedney, John Davies, and Bill Feetham, at the

## Legal Services

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The program did not become a reality for 14 months after its inception due to the very low salaries that were offered.

It was only through actions of the State of supplementing the federal salaries that they were able to hire attorneys at a scale comparable to the salaries earned by attorneys in the private sector.

The State did not request a supplement this year from the Legislature as the regional office in San Francisco for Legal Services finally did realize the low salaries they were giving and this led to an opening whereby Legal Services in Alaska could request additional moneys for salaries.

However, since then there has been a general cut back in spending in federal programs and the likelihood of additional moneys for salaries looks bleak.

If Legal Services in Alaska cannot acquire the additional moneys from the regional office the Board has decided to request the State and the Legislature make the additional appropriation.

They indicated that they should receive a reply on their request from San Francisco within a month.

In addition to attorneys being retained at Anchorage, Fairbanks and Juneau, they have seven law students working for them through the Vista program at Kotzebue, Nome, Bethel and Ft. Yukon.

## UA Scientist's New Book Details Progress on Aurora

COLLEGE—University of Alaska geophysicist Syun-Ichi Akasofu's new book, "Polar and Magnetospheric Substorms," published early this year, details progress on aurora scientists' hottest research problem—the interaction between the earth and the solar wind, a hot gas streaming outward from the sun.

According to Dr. Akasofu, an aurora specialist at UA's Geophysical Institute, substorms come in a variety of forms, the most common to Alaskans being auroral substorms observed as rapidly moving auroral curtains.

Other manifestations of substorm phenomena occur high in the upper reaches of the earth's atmosphere and far out into space in the planet's magnetosphere, a region filled with

charged particles trapped by the earth's magnetic field.

Much of the material contained in Akasofu's book is based on aurora research conducted by scientists at UA's Geophysical Institute.

The book, published by the Reidel Publishing Co. of Dordrecht, Holland is part of a series of volumes dealing with current problems in astrophysics and space science.

The volume is dedicated to Dr. Sydney J. Chapman, advisory scientific director of the institute, and an acknowledged world leader in the fields of geophysics and aurora research.

The book is primarily intended to aid graduate students and working space scientists around the world.

Geophysical Institute's seismological observatory will implant borehole seismometers 30 feet into bedrock at NASA's Gilmore Creek tracking station north of Fairbanks, at Paxson in the center of the Alaska Range, and at Mt. McKinley National Park.

The 12-foot pencil-shaped instrument packages will augment UA's existing seismic net—already the most wide-spread of any university-operated system in the U.S.

Seismic telemetry units will transmit earthquake shock wave information back to the observatory at the Geophysical Institute, enabling researchers to pinpoint epicenters by triangulating data supplied by instruments located throughout the Interior and southern coastal region of the state.

The new addition to the system will also provide UA seismologists with a more accurate means of determining earthquake depths in central Alaska.

Sensitive tilt meters in the lower half of the borehole units will play a key role in developing forecasting techniques.

In many instances, crustal deformations of the earth's crust, which are believed to cause many earthquakes, can be observed and even measured over a long period of time, alerting seismologists that an earthquake may be generated.

Seismologists vociferously assert that measuring minute shifts and deformations over an area encompassing thousands of square miles on the crust's surface cannot be construed as forecasting, but they just as readily explain that rudimentary forecasting may result from long term studies such as Dr. Berg's which correlate observed straining and tilting to earthquakes.

Dr. Berg believes Californians will have earthquake warnings sooner than Alaskans, "Because their fault systems are more orderly and much better known than Alaska's, and there are many more scientists concentrating on the quake problems associated with slippage along California's San Andreas fault."

Crustal deformation, Berg explains, can take two forms, either tensional or compressional straining within the crust, or slippage along a fault as evidenced in California.

"Sections of the crust adjacent to the San Andreas fault are moving in opposite directions," Berg says, "So long as there is slippage (a few inches per year) the crust is relieving its stresses and earthquake danger is low, but if the fault locks and slippage stops, the crust deforms and earthquake danger increases."

Alaska's geology, Berg points out, is much more complex than

California's, bringing to the fore such un-Californian complications as active volcanoes (which can trigger earthquakes), convoluted in interlocking faults that snake through the crust, and a growing chain of mountains dominated by the continent's highest peak.

Discounting the geological differences between Alaska and California, Dr. Berg believes that he and his California counterparts are confronted by a common problem, the solution of which could well be the crux of the forecasting dilemma.

"Right now the biggest problem is determining when deformation rates become high enough to trigger a catastrophic failure (an earthquake) in the crust," he says. "Just saying that the crust is being deformed, or even how much, isn't as important as saying that the crust will fail next week or next month."

"It is clear," he said, "that we must study the data from the borehole packages, correlating it with our other sources of seismic information, in order to establish a repetitive pattern of deformation and failure, strain and earthquake."

To do so will keep Dr. Berg and his associates busy for several years, even though earthquakes happen with regularity in Alaska—records indicate that Alaska (including the Aleutian chain) has a magnitude eight, or greater every ten years, a quake comparable to the ones which leveled San Francisco in 1906 and portions of Anchorage in 1964.

Research on the long term project will involve interpreting the daily yield from the seismic net as well as conducting laboratory experiments.

"Long before an earthquake occurs," Dr. Berg explains, "the rock which is being deformed develops small fractures (microfractures) which are roughly comparable to faults in the earth's crust, but they are measured in meters rather than miles."

Laboratory experiments with rocks representative of the earth's crustal materials will enable researchers to ascertain strain tolerances of various rock types before total failure. Outside the Geophysical Institute's labs, researchers will be analyzing failures on a larger scale—the earthquake shock waves that appear daily on UA's seismic records.

By correlating lab data on rock strength and seismic records linking crustal deformations and tilts to earthquakes, the UA research team headed by Dr. Berg is working toward the day when they'll actually be able to alert Alaskans to an impending earthquake, but as yet, they won't predict the date of their first prediction.